MRF-260 Installation Manual

Optimizing Narrow Band Reception with Complete Control Remotes

COMPLETE CONTROL™

Universal Remote Control®

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The Home Theater installation on the cover was designed and installed by Stone-Glidden of King of Prussia and Doylestown, PA.

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Introduction

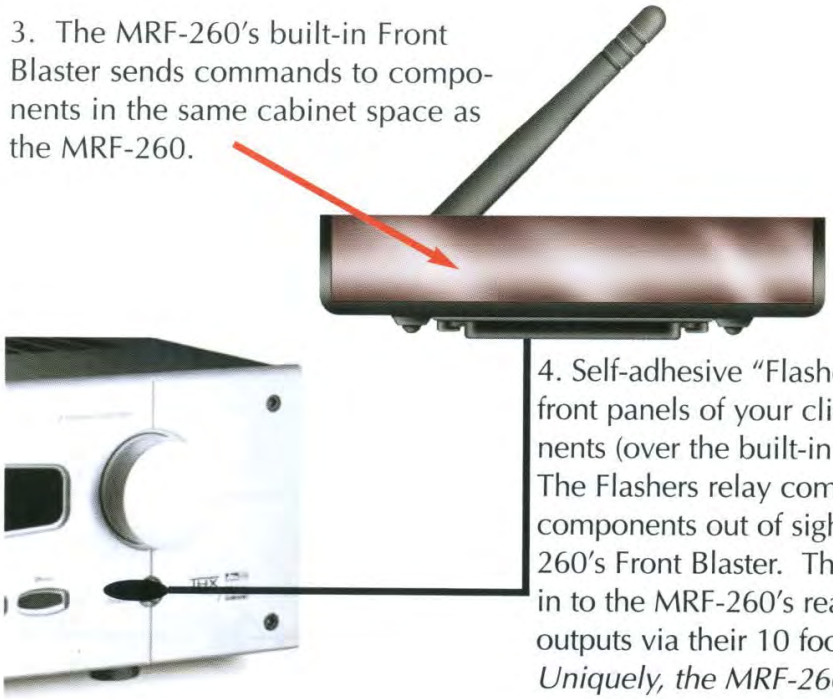
The MRF-260 base station is an "addressable" base station. RF Addressing gives you the ability to control as many as 60 identical components throughout a house. To enable better range and reliability the MRF-260 is equipped with the Narrow Band RF reception (like the MRF-350), so is only compatible with other Narrow Band remotes.

NOTE: *The MRF-260 is ONLY compatible with Narrow Band remotes: the current versions of the MX-3000, MX-950, MX-900, TX-1000, MX-850, MX-650 and the MX-350 remote controls. The MRF-260 is compatible with all MX-950s, MX-900s and TX-1000s, but is NOT compatible with MX-850, MX-650 or MX-350 remote controls manufactured before November 1, 2006 or an MX-3000 built before April, 2005. You can identify the build date of a remote control by looking at the serial number. The first 6 digits indicate the build date. If the serial number appears as 122905 014054, the first 6 digits indicate that the remote was built on December 29, 2005.*

1. MX/TX remote controls send radio waves in every direction, so your client enjoys "No More Pointing" operation!

2. The MRF-260's integrated Narrow Band RF receiver receives commands from any Narrow Band remote control.

3. The MRF-260's built-in Front Blaster sends commands to components in the same cabinet space as the MRF-260.



4. Self-adhesive "Flashers" affix to the front panels of your client's components (over the built-in IR sensor). The Flashers relay commands to components out of sight of the MRF-260's Front Blaster. The flashers plug in to the MRF-260's rear flasher line outputs via their 10 foot cables. *Uniquely, the MRF-260 can also connect to rear panel IR Inputs via its two adjustable Outputs.*

Features and Benefits

Interference Rejection and Extended Range via Narrow Band
The MRF-260 receives RF (radio frequency) signals via its integrated RF receiver and antenna. The MRF-260 displays RF interference via a bright red Status LED, which flickers when interference is present if the ID is set to 0. Simply relocate the MRF-260 should interference occur.

Two Fixed IR Outputs
The MRF-260 is equipped with two fixed IR line outputs with standard 3.5 jacks for standard IR emitter/flashers.

Two Variable IR Outputs Match Rear Panel IR Inputs
The MRF-260 is equipped with two adjustable IR line outputs. Each output can be individually matched to rear panel IR inputs on any component that is designed to be operated by a standard IR repeater. The outputs utilize a 3.5mm jack and are compatible with standard IR emitter/flashers as well.

Up To Fifteen Equipment Locations With Identical Components
Each MX/TX remote is "addressable." They can be programmed to specifically control components in a particular room by installing an MRF-260 base station at each location. In operation it's simple: when you select a device located in the Den, the MX/TX remote only sends commands to the Den. When you select a device located in the Family Room, the MX/TX remote only sends commands to it.

A Single MRF-260 Can Control an Array of Identical Components or Identical Zones of a Multi Zone Preamp/Matrix Switcher
Each MRF-260 has four "addressable" IR Line Outputs. For example, you can control up to four identical TV's with one MRF-260 or route volume commands for a specific zone to a particular zone IR input on a multi-zone preamp. If you have more than four identical components or zones, up to 15 additional MRF-260s can be installed to control them (thus allowing up to 60 identical components or zones in one house).

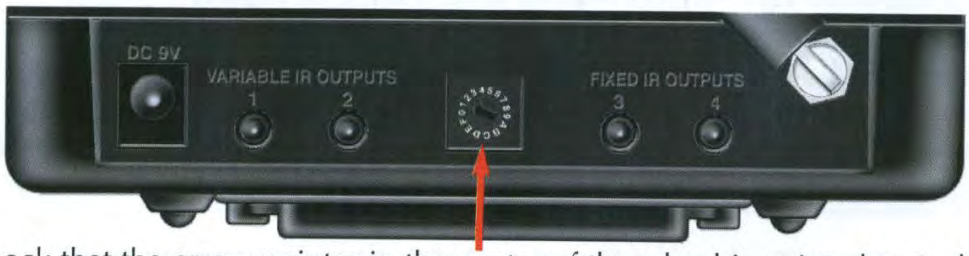
Parts Guide

The MRF-260 RF Base Station includes:

- 1 - MRF-260 Base Station
- 1 - Mounting Plate for wall mounting the MRF-260
- 4 - Screws for wall mounting
- 1 - 9V-300mA Power Supply
- 4 - Visible Flashers with 10 foot plug in cables.
- 4 - Extra self adhesive pads for Emitters
- 12 - Labels for IR Line Outputs
- 1 - Screwdriver for Variable Outputs

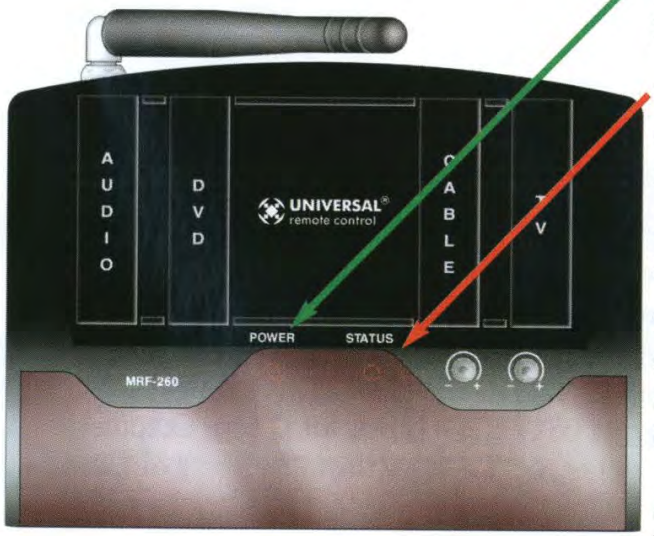
Installation

1. Unplug the MRF-260. Test all IR commands and macros line of sight.
2. Power on all AV components including the TV. Turn on all of the lights and lower all dimmers to 50%. Power on anything that may create RF Interference (particularly devices with high speed microprocessors or hard drives).
3. Check that the address wheel on the rear of the MRF-260 is set to ID#0 (the interference "sniffing" position).



Check that the arrow pointer in the center of the wheel is pointed to 0, the default "interference sniffing" position. If it is not, use a small flat blade screwdriver (included) to set the RF ID# to 0.

4. Connect the MRF-260 to its DC wall adapter and plug the wall adapter into a live AC outlet. Place the MRF-260 in a location at least 3 feet away from satellite receivers, cable boxes, HDTV tuners, DVRs, PCs or any other device with a high speed micro-processor (these generate broad band Radio Frequency Interference -RFI). Of course, you should keep in mind that the emitter cables are 10′ long.



The red POWER LED indicates that the MRF-260 is powered on.

The red STATUS LED flashes differently, based on the Address setting:

IF SET TO ID#0
The Status LED flashes when it receives ANY RF signal, including RFI. This makes ID#0 ideal for "sniffing" out RFI.

IF SET TO ANY OTHER ID#
The Status LED flashes ONLY when it receives a correctly addressed RF command.

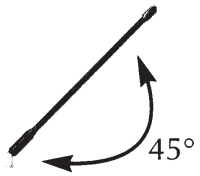
5. Observe the Status LED of the MRF-260. If it is glowing or flickering you must relocate the MRF-260 to a location where the LED doesn't flicker.

   If your installation location simply doesn't offer you any choice and you are detecting interference everywhere you place the MRF-260, you have two last resort options:

   a. Remove the MRF-260's antenna. This will reduce the range enormously, but may still be enough for this client.

   b. Admit defeat and install the two piece MRF-350 base station, which can have the RF Antenna module remotely located (even in another part of the house).

7. Once you have found a location that is absolutely free of RFI with everything on, test to see if the range is adequate and that macro reliability is perfect. Start with the antenna angle set to 45 degrees and positioned so that the long side of the antenna is facing the customer's favorite seating position.



   When testing, set both the remote and the MRF-260 to the same valid RF ID#. Keep in mind that zero (0) is not a valid RF ID#. Watch the Status LED on MRF-260 - it should light every time you press a button on the remote. This confirms that the signal was received and understood perfectly. If you repeat any button press multiple times and the Status LED lights correctly every time, you have no interference and a very reliable installation. If some of the presses do not light the Status LED, you still have some RFI. Your best strategy is return to step 3 and try to find a better location for the MRF-260.

8. Now that the location is fixed, connect each of the emitters to the appropriate IR output and run the cable to the appropriate component. Do not attach the emitters to the front panel yet!

   Utilize the included preprinted labels to identify which emitter goes to which component. If you'd like to make your own, the slots for the labels have been sized at 12mm to enable a Brother P-Touch 12mm label to fit perfectly.

NOTE: TiVo, Replay TV, other DVRs, Satellite Receivers and Cable Boxes are all extremely sensitive to IR overload or saturation. For this reason, it is recommended that you always connect the IR flashers for these types of component to the Variable IR Outputs of the MRF-260.

Testing

Test a few commands for each device before fixing the flasher in place on the front panel of a device.

Since TiVo, Replay TV, Satellite Receivers and Cable Boxes are all extremely sensitive to IR overload or saturation, you should test them thoroughly. Put up the on screen guide and test the navigation arrows. Compare operation via RF to the original remote control. Operation should be identical. RF is not slower. If operation is inconsistent or sluggish, lower the IR line output and/or reposition the flasher.

If you still have sluggish operation, check that the remote control is set to a particular LINE OUT, rather than ALL. When IR commands are sent to all the flashers in a cabinet, you can have difficulty adjusting the IR Output. Reprogram the remote control to send IR commands only via a specific (1-4) Line Output, then readjust the IR Line Output level.

Note: *Remember, the MRF-260 will NOT respond if you select IR line outputs 5 or 6. The MRF-260 has only four IR Line Outputs.*

1. Connect an IR emitter to each IR output and run the emitter wire to the front panel of each component. DO NOT STICK the emitter in place. ADJUST the level first.

2. Adjust each of the IR Output levels for best operation. If the component operates best at minimum level, but is still operating sluggishly or intermittently, move the emitter farther away from the components IR sensor.

Front Blaster Overload

A few models of audio/video components can be overloaded by the Front Blaster. If you are having intermittent or inconsistent results with a particular component, try repositioning the MRF-260 and facing the Front Blaster in a different direction. If this improves the situation but is impractical, it may be necessary to utilize the self-adhesive flashers only and follow the steps below to Disable the Front Blaster. This will limit the number of components your MRF-260 can control to four. If you have more than four components you can purchase an additional MRF-260 or upgrade to an MRF-350.

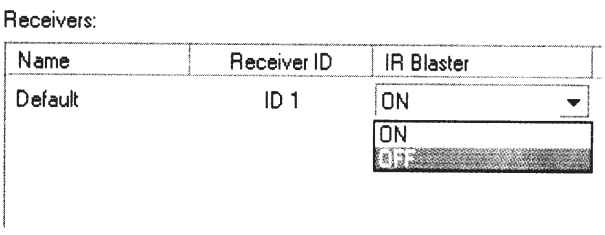
Disabling the Front Blaster - Step by Step via PC

Note: *If you are programming a URC MX "addressable" remote control that sets up without a PC, refer to the owners manual to disable the Front Blaster.*

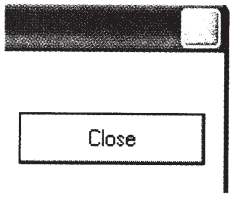
Open the PC software, then plug the MX PC programmable remote control into the PC. Open your saved configuration and follow these steps to turn off the front blaster:

Step 1 - Open the RF Setup Window
The RF Setup window opens after selecting RF Control or Settings from the Program Menu of most MX/TX editors or from the Main Menu of the ProWizard.

Step 2 - Setup the Receiver
Extend the RF Setup window by clicking on the RECEIVERS button.



Step 3 - Turn off the Front Blaster
Click on the cell in the IR LED OUTPUT/IR BLASTER column. A list box will appear. Select OFF from the list.



Next, click on Close to apply your change.

Controlling Four Identical Components/Zones

There are several considerations to take into account when you are installing an MRF-260 to control an array of identical components:

1. The RF ID# cannot be set to Code 0, the universal setting. You must use one of the fifteen unique IR Routing addresses.

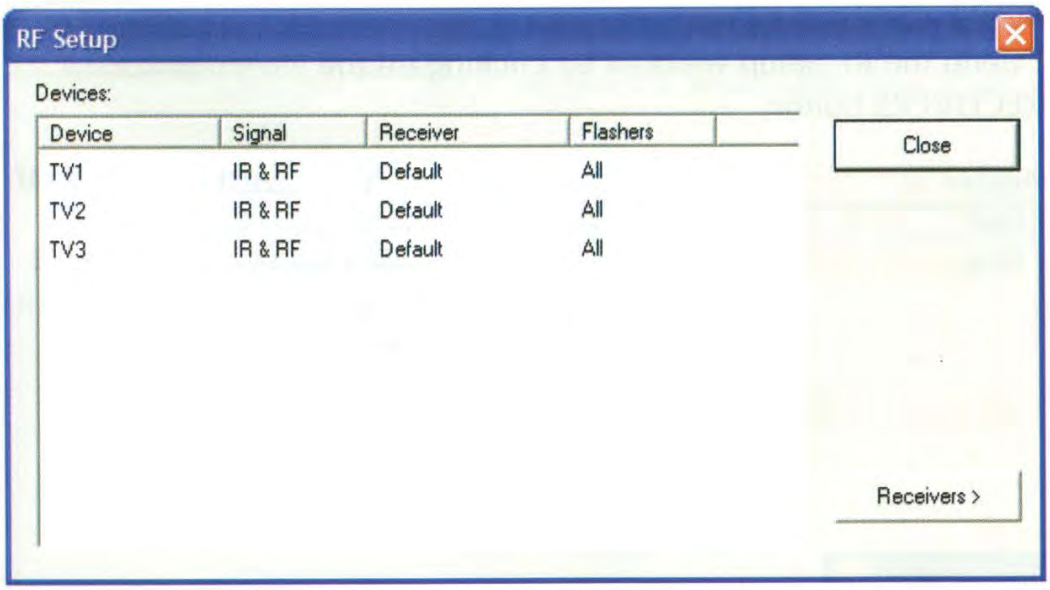
2. Each identical component must receive IR commands ONLY from a dedicated Flasher affixed to its front panel or a rear panel direct IR input. The SIGNAL of the remote should be set to RF ONLY for each identical component. IR can still be utilized for other devices in your system!

3. You must note the NUMBER of the Flasher Output you have utilized for EACH of the identical components.

Identical Components/Zones - Step by Step via PC

Step 1 - Create and Program a Device for Each Component/Zone
Try to name each device with a descriptive title. At a minimum, label them TV1, TV2, TV3 and so on.

Step 2 - Open the RF Setup Window
The RF Setup window opens after selecting RF Control from the Program Menu or from the ProWizard's Main Menu. The RF Setup window is composed of a "spread sheet" of options for EACH of your devices.

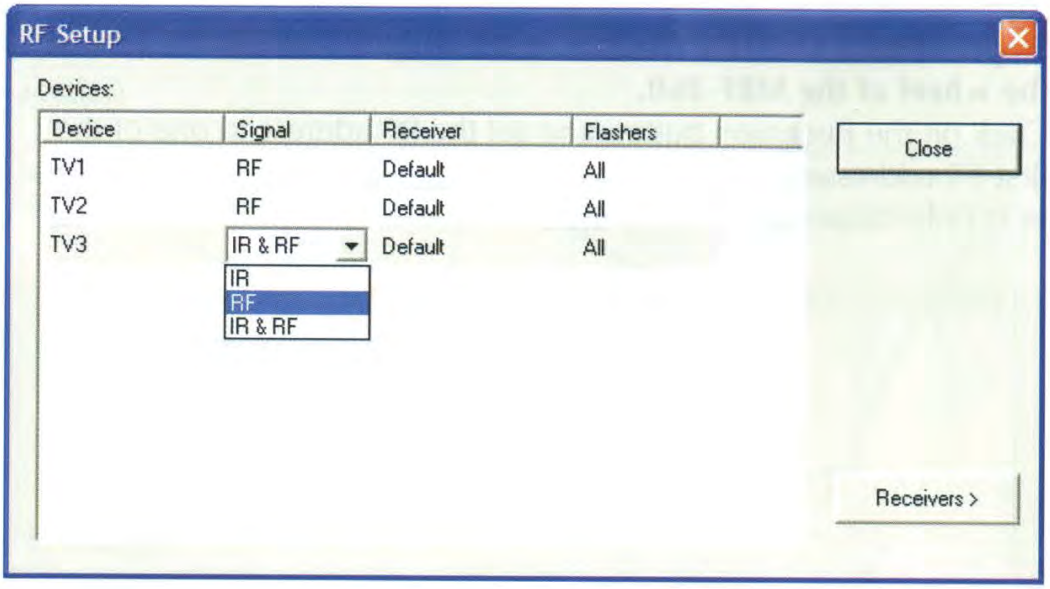


By looking at the Signal column, you can see that the factory default programming sets all of the devices to send both IR and RF commands. If you look at the column for Flashers, you can see that the default sends IR commands for all devices to ALL of the flashers. Both options must be changed for identical components. Additionally, you must disable the Front Blaster (see page 6 for directions).

Step 3 - Adjust the Signal For Each of the Identical Devices

The RF Setup window enables you to adjust the Signal output for each device individually, by clicking on the intersection of a row and a column and then selecting RF from the three options shown in the pull down list box.

Select RF from the three options shown for EACH of the identical TVs. You may leave the other components of the system set to IR & RF.



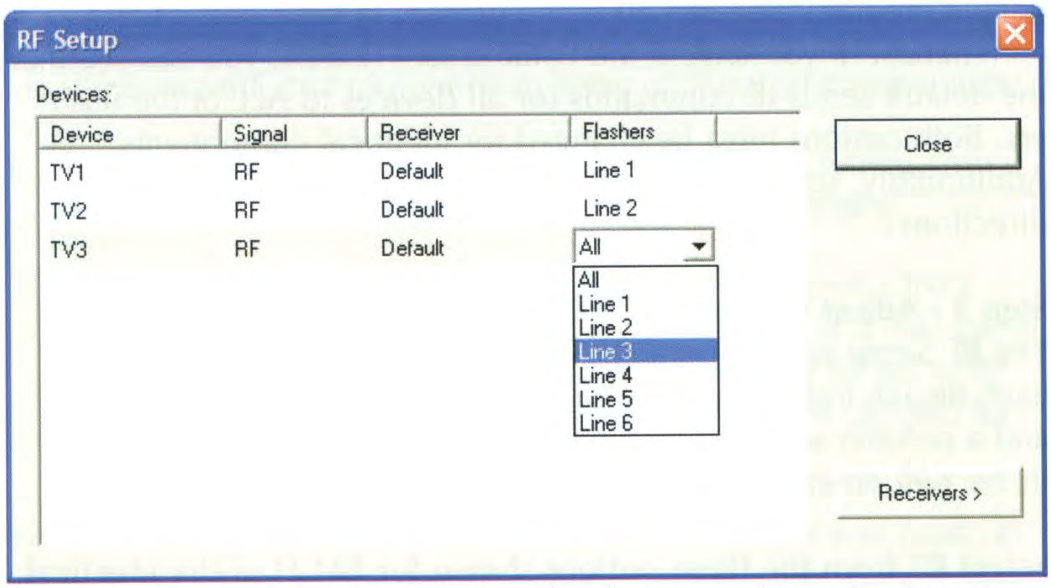
Step 4 - Adjust the Flashers For Each of the Identical Devices

The RF Setup window enables you to adjust which Flashers output by the remote control for each device individually, by clicking on the intersection of a row and a column and then selecting **1-4** from the seven options shown in the pull down list box.

Select the correct Flasher (refer to your connection notes) for EACH of the identical TVs. You may leave the other components of the system set to ALL.

See figure on the next page.

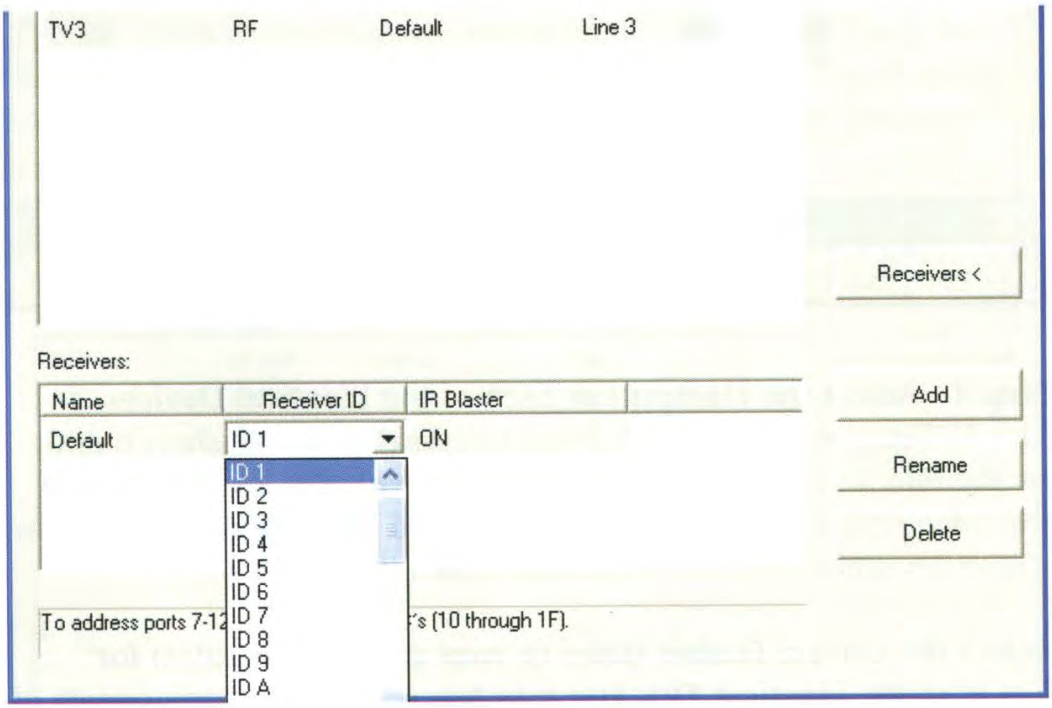
In the figure below, each device is set to a specific flasher.



Note: *Remember, the MRF-260 will only respond to selections 1 through 4.*

Step 5 - Make sure that the ID# is set on both the remote and on the wheel of the MRF-260.

Click on the Receivers button and set the RF address to one of the first 15 addresses (1-9 or A, B, C, D or E). The second set of addresses is only supported by MSC units.



Step 6 - Close the RF window and Download to the Remote.

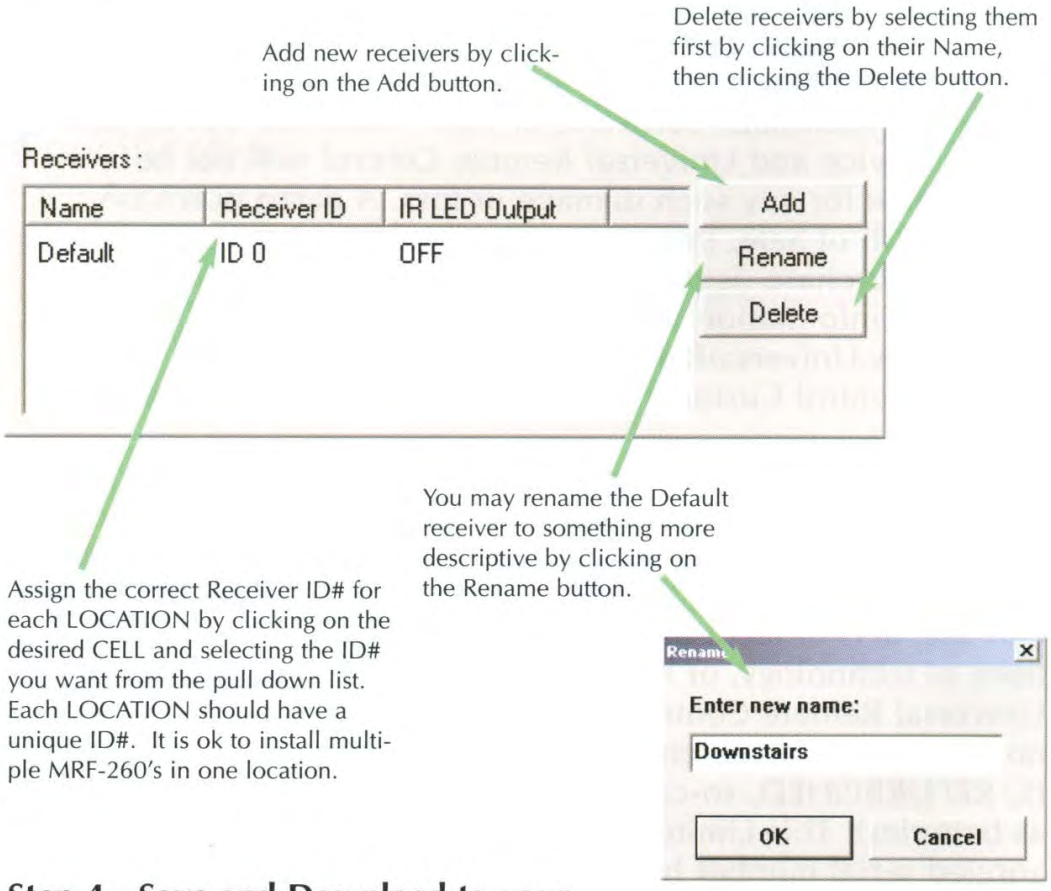
Programming For Multiple Equipment Locations

You can operate up to 15 different equipment locations, each with an MRF-260 assigned a unique Receiver ID#. You program each of your remotes to talk to the equipment locations you want by assigning each of your devices to a receiver. First, you must add and name your receivers for the locations they are placed in:

Step 1 - Open the RF Setup Window
The RF Setup window opens after selecting RF Control from the Program Menu or RF Settings from the Main Menu of ProWizard.

Step 2 - Reveal the Receiver settings
Extend the RF Setup window by clicking on the Receivers button of the RF setup window.

Step 3 - Add, Name and Assign Receiver ID#
Using the controls at the bottom extended portion of the RF Control window, add new receivers and rename them for the equipment location.


Add new receivers by clicking on the Add button.
Delete receivers by selecting them first by clicking on their Name, then clicking the Delete button.
Receivers :
Name
Receiver ID
IR LED Output
Default
ID 0
OFF
Add
Rename
Delete
You may rename the Default receiver to something more descriptive by clicking on the Rename button.
Assign the correct Receiver ID# for each LOCATION by clicking on the desired CELL and selecting the ID# you want from the pull down list. Each LOCATION should have a unique ID#. It is ok to install multiple MRF-260's in one location.
Enter new name:
Downstairs
OK
Cancel

Step 4 - Save and Download to your remote.

USA Limited Warranty Statement

Your Universal Remote Control, when delivered to you in new condition, is warranted against defects in materials or workmanship as follows: UNIVERSAL REMOTE CONTROL, INC. warrants this product against defects in material or workmanship for a period of one (1) year and as set forth below. Universal Remote Control will, at its sole option, repair the product using new or comparable rebuilt parts, or exchange the product for a comparable new or rebuilt product. In the event of a defect, these are your exclusive remedies.

This Limited Warranty covers only the hardware components packaged with the Product. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the Product; any such software is provided "AS IS" unless expressly provided for in any enclosed software Limited Warranty.

To obtain warranty service, you must deliver the product, freight prepaid, in its original packaging or packaging affording adequate protection to Universal Remote Control at the address provided in the Owner's Manual. It is your responsibility to backup any macro programming, artwork, software or other materials that may have been programmed into your unit. It is likely that such data, software, or other materials will be lost during service and Universal Remote Control will not be responsible for any such damage or loss. A dated purchase receipt, Bill of Sale, Installation Contract or other verifiable Proof of Purchase is required. For product support and other important information visit Universal Remote Control's website: http://www.UniversalRemoteControl.com or call the Universal Remote Control Customer Service Center (914) 835-4484.

This Limited Warranty only covers product issues caused by defects in material or workmanship during ordinary consumer use. It does not cover product issues caused by any other reason, including but not limited to product issues due to commercial use, acts of God, third-party installation, misuse, limitations of technology, or modification of or to any part of the Universal Remote Control product. This Limited Warranty does not cover Universal Remote Control products sold as USED, AS IS, REFURBISHED, so-called "B STOCK" or consumables (such as batteries). This Limited Warranty is invalid if the factory-applied serial number has been altered or removed from the product. This Limited Warranty is valid only in the United States of America. This Limited Warranty specifically excludes products sold by unauthorized resellers.

Frequently Asked Questions

Can I use flasher/emitters that I have already installed in the system to connect to the MRF-260?
Yes, the flashers are compatible if they use 3.5mm mono mini plugs with the same polarity (Tip is data, sleeve is ground).

I'm getting inconsistent operation regardless of flasher level or position.
Some components are easily overloaded with IR from nearby flashers. Prevent IR from affecting the problem component from other flashers or the front panel blaster by setting the device to a specific IR Line Output instead of ALL, then adjust the Line Output.

I have a row of identical TVs. I've correctly set the flasher outputs using the Editor software, yet when I send a command to one of them, the TV next to the selected TV also responds. How do I stop this?
First, check the RF ID#, if the RF ID# is set to 0, IR routing does not work. Second, set the RF ID# from 1-9 or A-F on both the remote control and the rear of the MRF-260. Third, check that the flasher level is set to the minimum necessary. Fourth, check that the emitter is facing the component.

Specifications

Power Supply: 9V 300mA
IR Flasher Line Outputs: 3.5mm Mono Mini Jack
RF Frequency: 418MHz

Information To The User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Note : The manufacturer is not responsible for any Radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

Universal Remote Control®

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